What is claimed is:

1. A method for monitoring a spin imparted on an optical fiber comprising the steps of:

imparting a spin on a high-temperature optical fiber which is drawn from a preform;

photographing a dispersion pattern peculiar to the spun optical fiber with a camera from scattered light naturally generated by the spin imparted on the optical fiber; and

displaying the photographed dispersion pattern,

wherein a form of the spin imparted on the optical fiber is monitored based on the displayed dispersion pattern.

2. A method for monitoring a spin imparted on an optical fiber according to claim 1,

wherein the monitoring of dispersion pattern is targeted for a bare optical fiber which is not yet coated with polymer.

3. A method for monitoring a spin imparted on an optical fiber according to claim 2,

wherein the monitoring of dispersion pattern is targeted for an optical fiber which is in a state between a preform heating process and an optical fiber cooling process.

4. A method for making an optical fiber comprising the steps of:

(a) heating an optical fiber preform to a predetermined softening temperature;

(b) drawing an optical fiber from the preform;

(c) cooling the drawn optical fiber to a temperature suitable for coating;

(d) coating at least one polymer layer on the cooled optical fiber;

(e) imparting bi-directional symmetric alternating spins on the optical fiber by

supplying clockwise/counterclockwise alternating torques to the optical fiber;

(f) photographing dispersion patterns peculiar to the spun optical fiber from scattered light naturally generated by the spin imparted on the optical fiber; and

wherein first and second dispersion patterns are photographed respectively at a first torque point in a clockwise direction and a second torque point in a counterclockwise direction which is symmetric to the first torque point,

(g) determining bi-directional symmetry of the imparted spin by comparing the photographed first and second dispersion patterns.

5. A method for making an optical fiber according to claim 4,

wherein the first torque point is a peak clockwise torque point, and the second torque point is a peak counterclockwise torque point.

6. A method for making an optical fiber according to claim 4, further comprising the step of:

(h) generating an alarm outside when the first and second dispersion patterns are not coincident in the step (g).

7. A method for making an optical fiber according to claim 6,

wherein the photographing of dispersion patterns is conducted using a camera, and

wherein at least one camera is installed between a preform heating device and an optical fiber coating device.

8. A method for making an optical fiber according to claim 7,

wherein at least one camera is installed between the preform heating device and an optical fiber cooling device.

9. A method for making an optical fiber according to claim 8,

wherein the determination of bi-directional symmetry of the spin is conducted using a computer connected to the camera, and

wherein the computer compares the pattern number of the first dispersion pattern image obtained from the camera with the pattern number of the second dispersion pattern image obtained from the camera, and determines the bi-directional symmetry of the spin on the basis of the coincidence of the numbers.

10. A method for making an optical fiber according to claim 6,

wherein the alternating torques is provided by vibrating a driving roller, contacting with the optical fiber, on the center of an axis substantially parallel to a drawing direction of the optical fiber.

11. A method for making an optical fiber according to claim 6,

wherein the alternating torques is provided by vibrating a driving roller, contacting with the optical fiber, with being tilted from an axis substantially parallel to a drawing direction of the optical fiber.

12. A method for controlling a spin imparted on an optical fiber comprising the steps of:

imparting circumferential spin on a high-temperature optical fiber drawn from a preform;

obtaining dispersion pattern data peculiar to the spun optical fiber from scattered light naturally generated from the spin imparted on the optical fiber; and

controlling rate and period of the spin imparted on the optical fiber on the basis of the obtained dispersion pattern data.

13. A method for controlling bi-directional symmetry of alternating

symmetrical spins imparted on an optical fiber in an optical fiber making process including the steps of: (a) heating an optical fiber preform to a predetermined softening temperature; (b) drawing an optical fiber from the preform; (c) cooling the drawn optical fiber to a temperature suitable for coating; (d) coating at least one polymer layer on the cooled optical fiber; and (e) imparting clockwise/counterclockwise alternating spins on the optical fiber by contacting the coated optical fiber to a guide roller and then vibrating the guide roller on the center of an axis substantially parallel to a drawing axis, wherein the method comprises the steps of:

photographing dispersion patterns peculiar to the spun optical fiber from scattered light naturally generated by the spin imparted on the optical fiber; and

wherein first and second dispersion patterns are photographed respectively at a first torque point in a clockwise direction of the optical fiber and a second torque point in a counterclockwise direction which is symmetric to the first torque point,

rearranging a center of the guide roller relative to the drawing axis and the rotating axis so that the number of the photographed first dispersion patterns is coincident with the number of the photographed second dispersion patterns.

14. A method for controlling bi-directional symmetry of alternating symmetrical spins imparted on an optical fiber according to claim 13,

wherein the rearrangement of the center of the guide roller is performed by minutely moving the guide roller to a direction perpendicular to the drawing axis or tilting the guide roller minutely on the center of the rotating axis.

15. A method for controlling bi-directional symmetry of alternating symmetrical spins imparted on an optical fiber according to claim 14,

wherein the first and second torque points are respectively peak torque points in

clockwise/counterclockwise directions.

16. A method for controlling bi-directional symmetry of alternating symmetrical spins imparted on an optical fiber according to claim 14,

wherein the photographing of dispersion patterns is conducted using a camera, and

wherein at least one camera is installed between a preform heating device and an optical fiber coating device.

17. A method for controlling bi-directional symmetry of alternating symmetrical spins imparted on an optical fiber according to claim 15,

wherein the rearrangement of the center of the guide roller is performed by driving and controlling a motor for moving the guide roller to a direction perpendicular to the drawing axis and a motor for tilting the guide roller a predetermined angle on the center of the rotating axis;

wherein the control of the motors is conducted using a computer connected to the camera; and

wherein the computer compares the pattern numbers of the first and second dispersion pattern images obtained from the camera, calculates a required travel of the guide roller center when the numbers are not coincided, and drives and controls the motors on the basis of the calculation.

18. A method for controlling bi-directional symmetry of alternating symmetrical spins imparted on an optical fiber according to claim 17,

wherein the alternating spins are provided by vibrating a driving roller, contacted with the optical fiber, on the center of an axis substantially parallel to the drawing direction of the optical fiber.

19. A method for controlling bi-directional symmetry of alternating symmetrical spins imparted on an optical fiber according to claim 16,

wherein the alternating spins are provided by vibrating a driving roller, contacted with the optical fiber, with being tilted as much as an angle (θ) from an axis substantially parallel to the drawing direction of the optical fiber.